

The Duties of the Individual and the Government in the Combat of Tuberculosis

PUBLISHED BY THE
COMMITTEE ON THE PREVENTION OF TUBERCULOSIS
OF THE CHARITY ORGANIZATION SOCIETY
105 EAST 22D STREET, NEW YORK

614,542
K757d
pam

614,542

THE COMMITTEE ON THE PREVENTION OF TUBERCULOSIS
OF
THE CHARITY ORGANIZATION SOCIETY
OF THE CITY OF NEW YORK

CHARLES F. COX, *Chairman*

OITO T. BANNARD

HERMANN M. BIGGS, M. D.

HERBERT S. BROWN

JOSEPH D. BRYANT, M. D.

MISS ELLA MABEL CLARK

ROBERT W. DE FOREST

EDWARD I. DEVINE

HOMER FOLKS

FRANKLIN H. GIDDINGS

HENRY HERBERT, M. D.

J. H. HUDDLESTON, M. D.

ROBERT HUNTER

A. JACOBI, M. D.

WALTER B. JAMES, M. D.

E. G. JANEWAY, M. D.

MISS A. B. JENNINGS

S. A. KNOPF, M. D.

ALEXANDER LAMBERT, M. D.

ERNST J. LEDERLE

MRS. FREDERIC S. LEE

EGBERT LE FEVRE, M. D.

HENRY P. LOOMIS, M. D.

MRS. JAMES E. NEWCOMB

EUGENE A. PHILBIN

T. MITCHELL PRUDDEN, M. D.

ANDREW H. SMITH, M. D.

W. G. THOMPSON, M. D.

E. L. TRUDEAU, M. D.

FRED'K L. WACHENHEIM, M. D.

R. C. W. WADSWORTH

MISS LILLIAN D. WALD

Secretary's Office, 105 East 22d Street.

THE DUTIES OF THE INDIVIDUAL AND THE GOVERNMENT IN THE COMBAT OF TUBERCULOSIS.¹

S. A. KNOPF, M. D., NEW YORK,

Honorary Vice-President of the British Congress on Tuberculosis.

Corresponding Member of the International Central Bureau for the Prevention of Consumption (Berlin, Ger.).
Consulting Physician to St. Gabriel's Sanatorium for Consumptives, Gabriels, N. Y.

By way of preface, I desire to state that I shall speak not only of the duty of the government but particularly of the duties of individuals, represented by the consumptives themselves, those living with them, the general public, the teachers, the clergy, the gentlemen of the press, and the philanthropists. I might be asked why I do not say anything of the duties of the physician. Let me assure you that the medical profession is fully aware of its great duties and responsibilities in this struggle against tuberculosis. Many of you have doubtlessly heard of the numerous interesting discussions in the various medical assemblies. The duties of the physician in this matter are, of course, of a specific character, and his curative and preventive measures in dealing with the tuberculosis problem have been amply discussed before medical audiences.

Whenever there is an enemy to fight we must know his strong and his weak points, and the more intimately we are acquainted with his strength and his weakness, the more likely we are to become victorious over him. Let us therefore consider for a moment the character and the peculiarities of the disease we are desirous to combat.

Definition of Pulmonary Tuberculosis.

Pulmonary tuberculosis, or consumption, is a chronic, infectious and communicable disease, caused by the presence of the tubercle bacillus, or germ of consumption, in the lungs. The disease is locally characterized by countless tubercles, that is to say, small rounded bodies, visible to the naked eye. The bacilli can be found by the million in the affected organ. It is this little parasite, fungus, or mushroom, belonging to the lowest scale of vegetable life, which must be considered as the specific cause of all tu-

berculous diseases. This parasite not only gradually destroys the lung substance through ulcerative processes, but at the same time gives off certain poisonous substances called toxins which give rise to various, and often serious, symptoms.

The important symptoms of pulmonary tuberculosis are cough, expectoration (spitting phlegm), fever (increased temperature of the body, especially in the evening hours), difficulty in breathing, pains in the chest, night-sweats, loss of appetite, hemorrhages (spitting of blood), and emaciation (loss of flesh). In the matter expectorated it is often possible to find the tubercle bacillus with the aid of the microscope and certain coloring matters. It appears in the form of small, slender rods.

How may this germ of consumption enter the human system?

Methods of Entrance of the Germ Into the Human System.

There are really three methods whereby this germ may enter; namely, by inhalation, that is, being breathed into the lungs; by ingestion, that is, being eaten with tuberculous food; and by inoculation, that is, the penetration of tuberculous substance through a wound in the skin.

Inhalation.

Let us treat first the most frequent method of the propagation of tuberculosis, namely, that arising from the indiscriminate deposit of the tuberculous sputum. A consumptive individual, even at a period when he is not confined to his bed, may expectorate enormous quantities of bacilli. Now, if his expectoration, or spittle, is carelessly deposited here and there so that it has an opportunity to dry and become pulverized, the least draught or motion of the air

¹ Address delivered under the auspices of the Committee on Tuberculosis of the Charity Organization Society of the City of New York, in the Assembly Hall of the United Charities Building, New York, on February 9, 1903.

may cause it to mingle with the dust, and the individual inhaling this dust-laden atmosphere is certainly exposed to the danger of becoming tuberculous if the system offers a favorable soil for the growth of the bacilli. By "favorable soil for the growth of bacilli" must be understood any condition in which the body is temporarily or permanently enfeebled. Such a condition may be inherited from parents, or acquired through alcoholism, or drunkenness, or other intemperate habits, through privation, or disease.

Drop Infection.

Besides the danger arising from carelessly deposited sputum, or spittle, the inhalation or ingestion of the small particles of saliva which may be expelled by the consumptive during his so-called dry cough, when speaking quickly or loudly, or when sneezing, must also be considered as dangerous for those who come in close contact with the invalid. These almost invisible drops of saliva may contain tubercle bacilli. Recent experiments in this direction have shown the possibility of infection by this means.

The next most frequent method of the propagation of tuberculosis is through the ingestion of the bacilli, that is to say, when the germ of consumption is taken with the food.

The third and much less frequent way of the cause of tuberculosis is the inoculation, or penetration of the tuberculous substance through the skin.

What should we do to stop the first and most frequent source of the dissemination of the bacillus?

A patient suffering from pulmonary consumption should know that no matter in what stage of the disease he may be, his expectoration, or spittle, may spread the germ of the disease if the matter expectorated is not destroyed before it has a chance to dry and become pulverized. The patient should, therefore, always spit in some receptacle intended for that purpose. It is best to have this vessel made of metal so as not to break. It should be half filled with water or some disinfecting fluid, the main thing being to make it impossible for the expectoration to dry.

In factories, stores, railroad cars, waiting rooms, court rooms, restaurants, saloons, meeting places, theaters, menageries—in short, wherever many people congregate—there should be a sufficient number of cuspidors well kept and regularly cleaned. They should be made of unbreakable material and have wide openings. If such measures are carried out, there will be no excuse for any one to expectorate on the floor and thus endanger the lives of his fellowmen.

A handkerchief should never be used as a receptacle for sputum. Patients who are too sick to make use of light porcelain or aluminum cups, should have a number of moist rags within easy reach. Care should be taken that the rags always remain moist, and that the used ones are burned before they have a chance to dry. The paper spit-cups with their contents should, of course, also be destroyed by fire.

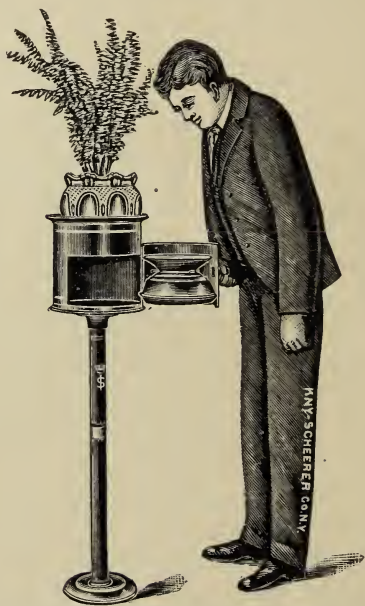


Fig. 1—Elevated Spittoon, Entirely of Metal—When in Use.

For the use in public institutions, in corridors, and grounds I would recommend an elevated spittoon (Figs. 1 and 2) which has numerous advantages over the ordinary spittoon placed on the floor. The latter is unsightly, may be tipped over, and usually presents on its rim or on the outside dried sputum which did not reach the receptacle proper. Having

no cover, these old-fashioned cuspidors allow animals and insects to get at the contents and thus help in the dissemination of the bacilli.

The stand of the elevated spittoon is three and one-half feet in height, and consists of iron tubing with a bottom plate, which can be screwed on to the floor or fastened to a sunken board when used out of doors. The large cast-iron base, however, is in itself sufficiently heavy to prevent the spittoon from tipping over. On top of this tube is a round box of sheet iron, with a door which can be tightly closed. Attached to this door is a ring in which rests a blue or white



Fig. 2—The Same, Closed.

enameled iron spittoon. Thus, when the box is opened the spittoon is drawn forward and ready for use. The top of the stand is provided with a rim to facilitate the placing of a flowerpot or other ornament. These elevated spittoons, only visible when in use, by their convenient height and easy manipulation, make the deposit of the sputum into the cuspidor more certain than in the case where spittoons are placed on the floor.

A similar elevated spittoon stand can be made of wood, which would make it considerably cheaper. (See Fig. 3.)

Proedohl's enameled iron spittoon (Fig. 4) and its modifications (Figs. 4a,

4b, and 4c) can be suspended at any height, and are particularly suitable for use in workshops, factories, and schools.

For street use, particularly in health resorts, I have devised the following re-

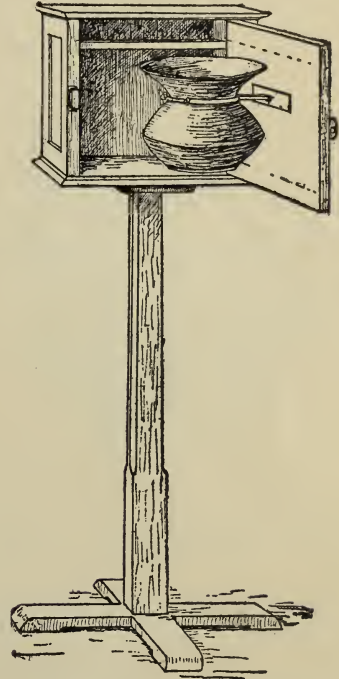


Fig. 3—Elevated Spittoon, Stand of Wood, Open.

ceptacle which might deserve the name "public self-cleansing spittoon" (Fig. 5). It is thirty-nine inches in height, supported by heavy tubing; the receptacle is

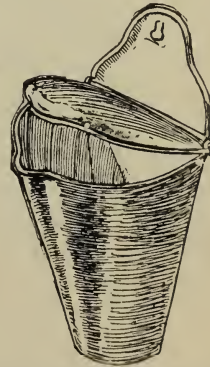


Fig. 4—Proedohl's Enameled Iron Spittoon, to be Suspended at Convenient Height.

made of heavy copper coated with pure tin on the inside, to the upper edge of which is screwed a perforated lead pipe

which supplies the water for constant flushing. The receptacle is nine inches in diameter, five inches deep, with a funnel-shaped bottom three inches deep, fitting into a two-inch iron cylinder support, which also serves as a connection sewer, and this support is attached to a heavy cast-iron base. The lead-pipe water sup-

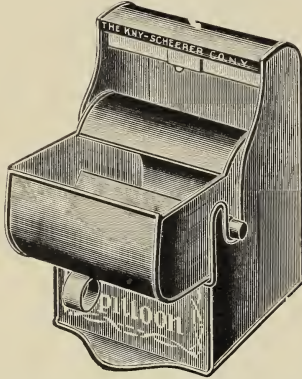


Fig. 4a—Wall Cuspidor of Metal, Open.

ply passes along the inside of the apparatus and can be attached to any hydrant.

When outdoors, the patient should use a pocket flask of metal, strong glass or pasteboard. There are numerous kinds of these in the market.

I show you here a little model which, perhaps, answers all the re-

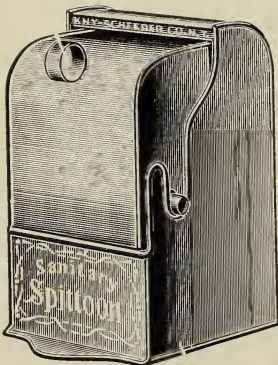


Fig. 4b—Wall Cuspidor of Metal, Closed.

quirements (Figs. 6, 7, and 8). As you see it is oval in shape and can be conveniently placed in a pocket. It is about three and three-quarters inches in height, its longest diameter is two and three-quarters inches, and its shortest diameter one and one-half inches. The

opening is round and has a diameter of one and one-half inches. A movable funnel prevents the contents from soiling the cover, acting on the principle of the reversible inkstand. The flask is made of spring brass and is electro-nickel-plated. Two seamless brass cups are welded together, forming the flask, to which the cover is firmly soldered and the funnel spun (seamless) with a flange fits exactly on the rim of the cup. The cover is closely fitted with an elastic rubber ring for the purpose of preventing leakage. There is a strong spring catch



Fig. 4c—Wall Cuspidor of Metal in Use.

which serves for opening and closing, and the flask can be manipulated with one hand by pressing with the thumb against the opening spring and closing the cover with the index finger. By the aid of a wire hook the funnel can easily be removed and the flask emptied. By placing the flask in the center of a moderately sized handkerchief, taking up the four corners and putting an elastic band around the neck of the flask outside of the handkerchief the cuspidor can be used without attracting any attention.

I also show you here a few other less expensive pocket metal flasks (Figs. 9

and 10) and paper spit cups and purses (Figs. 11 and 12) which may answer the purpose just as well. Some of these, such

tives who cannot be persuaded to use the pocket flask, for the simple reason that they do not wish to draw attention to



Fig. 5—Elevated Self-Cleansing Street Spittoon.

as the Dettweiler flasks (Fig. 13) and its modification, the one illustrated in Fig. 14, are made of blue glass.

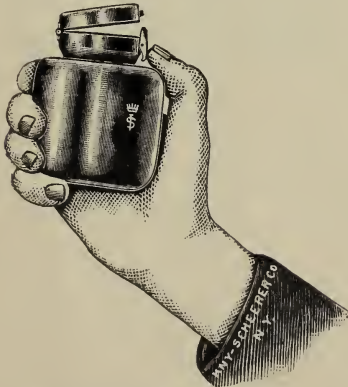


Fig. 6—Nickel-plated, Oval-shaped Pocket Flask. Manageable With One Hand.

For use at the bedside such sputum cups as illustrated in Figs. 15, 16, and 17, made of pasteboard, or such as shown in Fig. 18, made of light metal, are most convenient.

There will always be some consump-

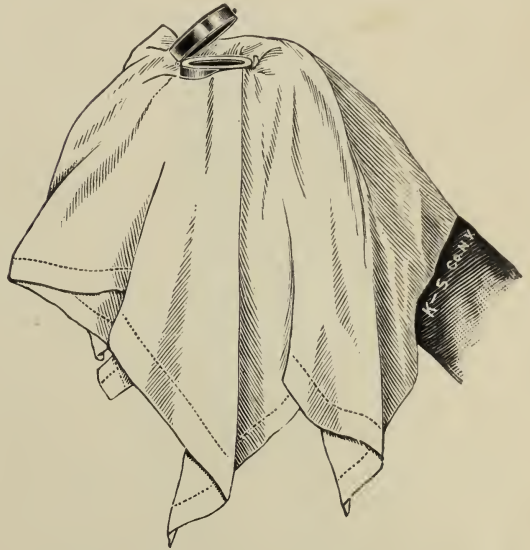


Fig. 7—The Same, Hidden in the Folds of a Handkerchief.

their malady. The only thing for these people to do is to use squares of soft muslin, cheese-cloth, cheap handkerchiefs or Japanese paper handkerchiefs specially manufactured for that purpose, which can be burned after use. They should al-

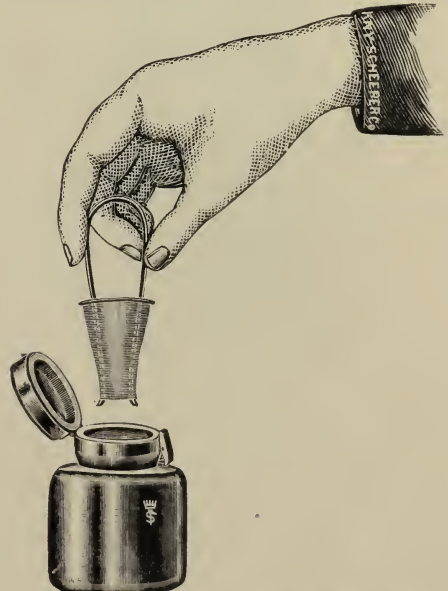


Fig. 8—Method of Emptying the Flask.

so place in their pockets a removable lining of rubber or other impermeable substance which can be thoroughly cleaned. This additional pocket could be fastened



Fig. 9—Round-shaped, Nickel-plated Pocket Flask. Manageable With One Hand.

to the inside of the ordinary pocket by clamps, and would thus be of no inconvenience to the patient. A pouch of vulcanized rubber or an oriental tobacco-

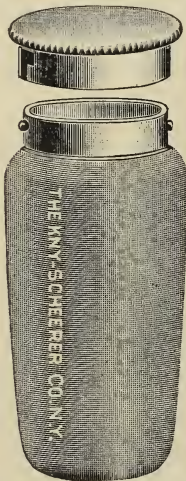


Fig. 10—Cheap Metal Flask, With Bayonet Closure.

pouch may be used in place of the extra pocket of impermeable material.

The danger of dissemination of the bacilli through the so-called dry cough (drop infection) is relatively small; we should, however, insist that the patient hold a handkerchief before his mouth or nose when he coughs or sneezes. The consumptive should be advised to carry two

handkerchiefs with him, one to hold before his mouth and to wipe it with after having expectorated; the other to use only to wipe his nose. By being careful with the use of his handkerchiefs, the danger of infecting his nose and bronchial tubes will be materially lessened.

All soiled linens (sheets, pillow cases, underwear, napkins, handkerchiefs, etc.) used by the consumptive should not be handled more than necessary, but should be placed in water as soon as possible after removal from the bed or body. It is better to wash these articles separately, and only after having been thoroughly boiled

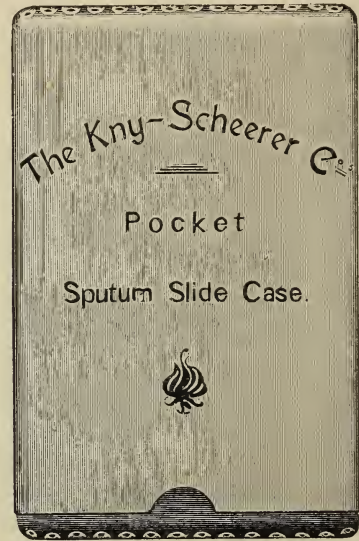


Fig. 11—Pasteboard Sputum Case, Resembling Cigar Case.

should they be put with the common laundry. Whenever it is not possible to carry out these precautionary measures in their entirety, one should strive to follow them as far as it is in one's power.

Ingestion of Tuberculous Food.

Against the danger from infection through tuberculous food we will say that whenever one is not reasonably certain that the meat he eats has been carefully inspected and declared free from disease germs, it should be very thoroughly cooked. By this means one is certain to kill all the dangerous micro-organisms. Against the sale of tuberculous milk, there are very excellent laws in some states of the union which are rigorously en-

forced. In some, the laws are less good, and in some there are no laws at the present time. In justice to farmers and dairy-men it must, however, be said that there are many who do their very best to pro-

it is intended as food for children. Milk obtained from stores and from milk peddlers should invariably be submitted to boiling or sterilization. When milk is kept slowly boiling for five minutes, all



Fig. 12—Pasteboard Purse.

tect themselves and their fellowmen from the danger of tuberculosis. They have their cows tested regularly, destroy the animals which are found to be tuberculous, and keep their stables and utensils

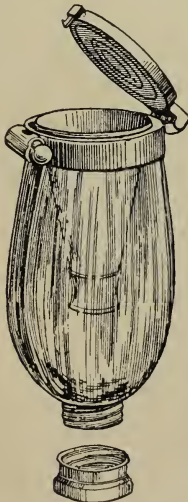


Fig. 13—Dettweiler's Pocket Flask.

for milk as clean as possible. Unless one can be reasonably sure that the cows from which the milk is derived are healthy and not tuberculous, the milk should be boiled or sterilized before use, especially when

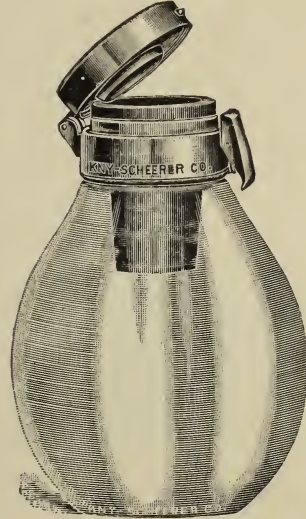


Fig. 14—Blue Glass Sputum Flask. Manageable With One Hand.

the bacilli are killed, and the same result is obtained by the sterilizing process; that is to say, to keep the milk heated for at

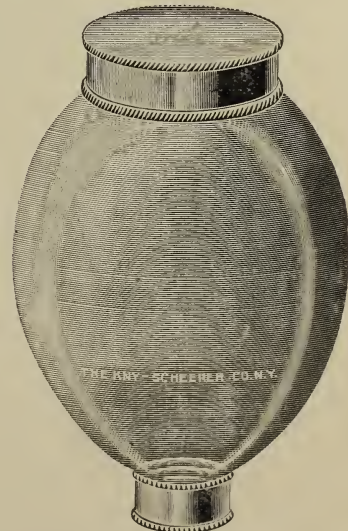


Fig. 14a—Blue Glass Sputum Flask with Dettweiler End Piece.

least half an hour at a temperature of about 70 degrees centigrade or 160 degrees Fahrenheit. There are now in the

market a number of cheap and practical apparatuses for sterilizing milk which can be obtained at almost any drug store.

Raw fruit bought from the push-cart man, or, for that matter, derived from any other source, should be washed, peeled or cooked before being eaten.

There is another possibility whereby the germs of consumption may enter our stomach or intestines, namely, through

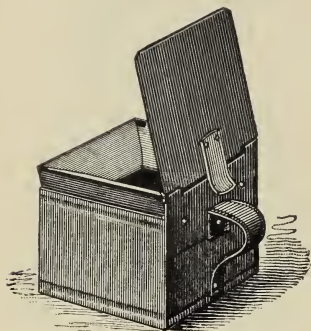


Fig. 15—Frame for Seabury & Johnson's Sputum Cup.

kissing the consumptive, or using utensils which have been soiled by the saliva of the patient. Therefore, the consumptive should never kiss, no matter whom, on the mouth, and children should be taught not to allow any one to kiss them except on the cheek or not at all. Tuberculous patients should have their own drinking glasses, spoons, forks, etc.; or at least, all table utensils which have served

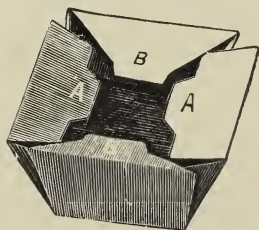


Fig. 16—Pasteboard Cup for Seabury & Johnson's Frame.

the tuberculous patient should be sterilized in boiling water after use.

It is, of course, also possible that the consumptive may contract intestinal tuberculosis when he, out of false modesty, swallows his expectoration. He should also remember never to touch food before having washed his hands very thoroughly. Even with the greatest care it is possible that he may have soiled his hands with tuberculous expectoration.

Infection by Inoculation.

Inoculation, or the penetration of tuberculous substance through the skin, happens perhaps most frequently through injuries received while cleaning nickel or chipped glass or porcelain cuspidors which have been used by consumptives. It is also possible for the bacilli to enter the circulation if the person cleaning the spittoons happens to have a wound or open sore on his hands. Persons intrusted with the care of the spittoons in a private

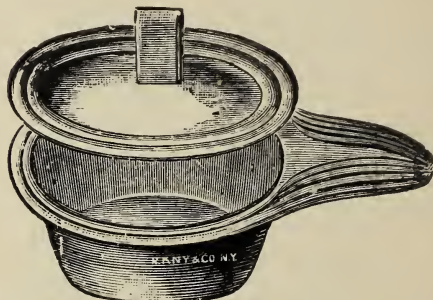


Fig. 17—Pasteboard Sputum Cup for Bedside.

home or an institution for consumptives should wear rubber gloves while cleaning these vessels. At times the patient may inoculate himself by placing an accidentally injured finger in his mouth, or by carelessly soiling an open wound with his expectoration. Physicians, students of medicine or veterinary science, butchers,



Fig. 18—Metal Spit Cup for Bedside.

etc., are also exposed to the danger of wounding themselves with instruments which may have come in contact with tuberculous matter. Extreme care is the only remedy for all persons thus exposed. If one has been unfortunate enough to receive injury and tuberculous inoculation is feared, the best thing to do is to let the wound bleed freely, wash it thoroughly with water that has been boiled, with a five per cent solution of carbolic acid, or with pure alcohol; dress the wound with a clean rag dipped in any of these

liquids, and seek as soon as possible the advice of a physician.

I have thus far only spoken of tuberculosis which manifests itself in the pulmonary form, that is to say, consumption of the lungs, of intestinal tuberculosis, that is to say, consumption of the bowels, and tuberculosis of the skin, or lupus. But you must know that every organ in the body, such as the throat, the bones, and the covering of the brain and spinal column, are also not infrequently invaded by the tubercle bacillus. In the latter form the disease is technically called tuberculosis meningitis.

Natural Resistance of the Healthy Individual.

After all that you have heard so far of the contagiousness, or rather the communicability of tuberculosis, and consumption in particular, I do not wish you to think that a breath in the atmosphere accidentally laden with bacilli would certainly render a healthy individual consumptive, or that by a swallow of tuberculous milk, or a little injury from a broken cuspidor, one must necessarily become tuberculous. The secretions of our nasal cavities, doubtlessly also the blood, and the secretions of the stomach of the healthy individual, have bactericidal properties; that is to say, they kill the dangerous germs before they have a chance to do harm. Therefore, the healthy man and woman should not have an exaggerated fear of tuberculosis, but they should, nevertheless, not recklessly expose themselves to the danger of infection.

But who are the individuals who must be particularly careful so as not to be attacked by the almost ever present tubercle bacillus?

Predisposition.

There are four classes: First, those who have a hereditary predisposition to consumption; secondly, those who have weakened their system and thus predisposed themselves to consumption by the intemperate use of alcoholic beverages, by a dissipated life, by excesses of all kinds, etc.; thirdly, those whose constitution has been weakened through disease—for example, pneumonia, typhoid fever, smallpox, measles, whooping-cough,

syphilis, influenza, etc.; fourthly, those whose occupations, trades or professions, such as printing, hat-making, tailoring, weaving, and all occupations where the worker is much exposed to the inhalation of various kinds of dust, have rendered them particularly liable to consumption.

Hereditary Consumption.

Before I proceed to give you a few of the essential points how to overcome such a predisposition to consumption, let me answer the question: "What about those who have a so-called hereditary consumption?" Permit me to say that the popular notion concerning hereditary consumption is in my humble opinion absolutely erroneous. Consumption has perhaps never been inherited either from the father or the mother, but the child has usually been infected by its well-meaning but ignorant consumptive parents after birth. The mother has kissed the child, taken it into her bed, allowed it to use the same spoons and utensils which she has used herself, and thus unconsciously has conveyed the disease to her infant. Through kissing and caressing a consumptive father, the child may also be infected; or again, either the one or the other parent may have been careless with their expectoration, may have spat on the floor where the child plays. It must be obvious to any thinking individual that if such uncleanly habits of the father or mother prevail the healthy born child is not liable to remain healthy long.

I have said that consumption is not hereditary, and children born of consumptive parents need not necessarily contract the disease. I, myself, have seen children of a consumptive parent grow up to be strong men and women. But their parents were not only careful, clean and conscientious; they were also aware that, while they did not transmit consumption to their children, they have transmitted to them a tendency, or predisposition, to this disease. This hereditary predisposition is, however, a condition which can be overcome by judicious training, proper food, plenty of outdoor exercises, and the avoidance of all excesses. Every predisposed individual should dress sensibly and according to the season. Never should they wear gar-

ments which restrict circulation or hinder the free physiological function of the chest or abdomen. Tightly laced corsets, tight neckwear, tight shoes, are all pernicious and particularly dangerous to the individual predisposed to tuberculosis.

Alcoholism.

A predisposition, whether inherited or acquired, may be explained as a peculiar weakened state of the system which offers a favorable soil for the growth and multiplication of the germs of consumption. I have already said what should be the duty of the parents if they are themselves consumptive and fear to have transmitted to their offsprings a predisposition to the disease. Concerning alcoholism and other intemperate habits, which are so often the forerunners of consumption, I desire to speak plainly. I do not wish to appear to you as a temperance lecturer, condemning all and everything which does not subscribe to the doctrines of the temperance party. I consider alcohol a medicine, at times indispensable in the treatment of certain diseases; but liquor as a beverage is never useful and nearly always harmful. Alcoholism must be considered the greatest enemy of the welfare of a nation, the most frequent destroyer of family happiness, the cause of the ruin of mind, body and soul; and certainly the most active co-operator of the deadly tubercle bacillus.

To combat alcoholism (drunkenness or intemperance), education above all is required. Extreme prosecution and fanatical laws will do little good. From early childhood the dangers of intemperance and its fearful consequences should be taught. In schools and at home the drunkard should be pictured as the most unhappy of all mortals. While the very moderate use of feeble alcoholic drinks, such as light beers, may be considered as harmless to adults when taken with their meals, alcohol should never be given to children, even in the smallest quantities. In families in which there is a fear of hereditary transmission of the desire for strong drink, even the mildest alcoholic drinks should be absolutely avoided. It would also be best if all people so predisposed, or who may have acquired only the occasional desire for drink, would

never smoke, for experience has taught that attacks of dipsomania (periodical sprees) are often caused by an excessive use of tobacco. The young man starting out in life should take with him the moral training which will enable him to be a gentleman, and be considered a polite gentleman, though he absolutely refuses ever to enter a liquor saloon in order to treat or be treated to drink. It is this treating habit—alas! so prevalent in our American society—which has ruined many a young man and made him a moral and physical wreck. The creation of tea and coffee houses where warm, non-alcoholic drinks, including bouillon, are sold in winter and cool ones in summer, are to be encouraged. It would be of additional advantage if some of these houses could also offer healthful amusements for old and young. Temperance societies, which through tactful and intelligent propaganda help to combat the fearful evil of alcoholism, should receive encouragement from everybody.

There is another point in regard to alcohol and tuberculosis I wish to emphasize, and that is the idea that alcohol is a remedy or even a specific remedy for consumption. There has never been a greater mistake made. Alcohol has never cured and never will cure tuberculosis. It will either prevent or retard recovery. It is like a two-edged weapon; on one side it poisons the system, and on the other side it ruins the stomach and thus prevents this organ from properly digesting the necessary food. Truly pathetic are the results of this erroneous doctrine in the families of the poor, where instead of procuring good nourishment for the invalid, liquor has been brought in far too large quantities, so that often there was not enough money left for food for the sufferer nor for the other members of the family.

Diseases and Occupations which Predispose to Consumption.

The individual enfeebled by disease, such as typhoid fever, grip, etc., should lead a particularly careful life and avoid crowded meeting places and all localities where the air is vitiated and where he is in danger of coming in contact with careless or ignorant individuals who ex-

pectorate everywhere. Men who have a trade, such as printers, tailors, bookkeepers or other workers whose occupations are more or less predisposing to tuberculosis, can render their work relatively healthful by leading a sober life and, when not at work, spending as much time as possible in the open air, by breathing deeply and keeping the body in a thoroughly good condition through regular bathing and judicious exercise.

The Curability and Modern Methods of Treatment of Consumption.

I have taken for the title of my address to-night "The Duties of the Individual and the Government in the Combat of Tuberculosis," and I believe I have said all I could in the brief space of time allotted to me of the duties of the consumptive, of those living with him, of those who are in fear of becoming consumptive, and of the parents who may have transmitted to their children a predisposition to the disease. The duty of the individual who is not included in these four classes is to make himself acquainted with the facts stated. Everyone, whether he is consumptive, or lives with consumptives, or has nothing whatsoever to do with consumptives, should know the few principal sources for the propagation of the disease and the means to combat them. It should be known to everyone that consumption is an infectious, communicable, preventable, and curable disease, and that in the early stages the cure is often accomplished as many as seventy-five to eighty-five times out of a hundred. What is most interesting to know is that this cure can not only be accomplished in California, or Colorado, but also in our own home climate; not, however, by quacks and patent medicines, but by the scientific and judicious use of fresh air, sunshine, water, abundant and good food (milk, eggs, meat, vegetables, fruit), and the help of certain medicinal substances when the just-mentioned hygienic and dietic means do not suffice in themselves to combat the disease.

The thorough and constant supervision of the pulmonary invalid, the immediate intervention when new symptoms mani-

fest themselves or old ones become aggravated or do not disappear rapidly enough, the prescribing of proper food and drink, can only be done by the thoroughly trained physician, either in the home of the patient or a properly conducted sanatorium.

Before proceeding to point out to some individuals their special duties in the combat of tuberculosis, I would like to say a word which applies to all. On everyone with the knowledge of the prevention of consumption, knowledge which he may have possessed already or which I may have been fortunate enough to convey to him, I think it my duty to impress the fact that he can do something toward the combat of the disease.

The Duties of the Individual Citizen.

If you are in the presence of a consumptive who is not yet under medical care, teach him what you know of the prevention of the disease and advise him to seek the counsel of a competent physician. If he is too poor to pay for a consultation, and too proud to ask it for nothing, tell him to apply to the health department, which will send him one of its physicians without cost. No tuberculous invalid, no matter in what stage of the disease, whether living in a palace or in the poorest tenement house, should be without a medical adviser. If you meet a consumptive who is ignorant of the precautions he should take, do not shun him like a leper, but treat him with kindness, and convince him that whatever he does to prevent the spread of the disease among others will also improve his own condition and increase the chances of his recovery. Let me tell you that a clean, conscientious consumptive is as safe a person to associate with as anybody. If in your daily life you can influence others to make themselves familiar with the necessary knowledge of the prevention of tuberculosis, do so! If through your influence, your words and example, you can combat this fearful curse of our nation—alcoholism—I beseech you, do your duty.

Some individuals have, by virtue of their calling, a special duty to perform in the combat of tuberculosis. Of these

I mention first the teachers of the public schools, the clergymen, the editors of the public press, employers and philanthropists.

The Duties of the Teacher.

The teachers of our public schools should not only be familiar with the ordinary methods of preventing the spread of the disease, preach and practise in their classrooms ample ventilation; but they should also be familiar with the general appearance of the tuberculous child, so that they may call the attention of the school physician or the parents to the condition of the pupil. It should be known that bone and joint tuberculosis is most frequently manifested in childhood. The early symptoms of tuberculosis of the bones and joints show themselves in the lameness and easy tiring of the arms or legs affected. If the spinal column is affected, the symptoms will depend upon the location of the vertebrae which is attacked by the disease. Scrofulosis, which is only a milder form of tuberculosis, and which is even more frequent than bone tuberculosis in children, is easily recognized. The scrofulous child is usually pale with flabby skin and muscles. The glands around the neck are swollen, and skin disease, sore eyes, and running ears are frequent symptoms. The little patient usually manifests a phlegmatic condition, but we may also find some that are nervous and irritable. The latter often have a peculiarly white, delicate skin, which makes the veins visible. Fever may be observed in some children. In view of the happily very curable nature of scrofulous affections, the importance of the early recognition and of the timely and judicious treatment, is, of course, self-evident. This scrofulous condition may be either inherited or acquired. The hereditary type comes from parents who are scrofulous, tuberculous, or syphilitic. It has also been proved that when one or both of the parents were alcoholics, that is to say, addicted to the chronic use of intoxicants, their offsprings have become scrofulous.

All this shows how dangerous it is for weakly and sickly persons, or those afflicted with any of the above-mentioned diseases, to marry and have children be-

fore being completely restored to health. We wish to state again that all these diseases can be cured by timely medical treatment. To be cured from alcoholism, the physician's help is not always necessary. In most cases it requires only the earnest and honest endeavor to abstain.

The principals of schools should make it their duty to incorporate in the curriculum of all classes gymnastics and outdoor exercises and play. The mental development of our children, valuable as it is, should never be pushed to the detriment of their physical development and well being.

The Duties of the Clergyman.

The clergymen, too, should inculcate these ideas into the minds of the people under their charge, and they, too, should feel pride in having their churches hygienically constructed and well ventilated. Fixed carpets should not be used in places of worship where so many people congregate. Catholic priests in charge of large congregations may do well to follow the example of the great Roman divine, the Bishop of Fano in Italy. In a circular recently issued by him, he asks the priests of his diocese to comply with the following rules:

(1) In every church, the floor must be regularly cleaned with sawdust, saturated with a strong sublimate solution. This thorough cleaning should take place particularly after holidays when great masses of people have visited the church.

(2) Every week all ordinary chairs and confessional chairs must be thoroughly cleaned with moist rags.

(3) The grate of the confessional chairs must be washed every week with lye and then polished.

It might be of advantage if such articles of adoration as crosses, statues, or, as in Greek churches, pictures, which are often kissed by devout Catholics, be included in the periodic disinfection. Kissing the Bible when taking an oath should be discouraged by jurists and divines.

Ministers of all denominations should consider it beneath their dignity to allow their names to be used to advertise patent medicines and other secret remedies. I am convinced that if they were aware of the fact that many of the advertised patent remedies contain as much as thirty and

forty per cent of alcohol and often other dangerous ingredients, they would refrain from indorsing the use of medicines of whose composition they have not the least idea. Neither should religious newspapers lend their columns to the advertisement of nostrums and patented remedies of all sorts. It is to be regretted that patent medicines are also not infrequently recommended by statesmen and legislators. Their personal indorsement of this or that secret remedy, given without forethought and perhaps even with good intentions, has often done irreparable harm to the sufferers.

The Duties of the Public Press.

Of the duties of the public press in this fight against the "great white plague," the most formidable disease of the masses, I cannot speak earnestly enough. Our daily and weekly papers have already done much good in disseminating knowledge regarding the prevention of consumption. By continuing to spread the literature of the various associations and committees on the prevention of tuberculosis as a disease of the masses, they do perhaps more than any other agent.

Unscrupulous Quacks and Their Methods of Advertising So-called Infallible Consumption Cures.

Unfortunately, the public press serves also for the advertising of the many "absolutely sure consumptive cures," which are from time to time put on the market by unscrupulous quacks. I am nevertheless sanguine enough to hope that in time the better class of newspapers will, in the interest of the community at large, no longer extend the hospitality of their columns to such dangerous advertising matter, especially when it is protested against by the intelligent reader. How many poor consumptives have lost their last little reserve fund by giving everything they had for a dozen bottles of the "sure and quick cure," only those who come much in contact with them know. How unscrupulous some of these charlatans are in their method of procuring certificates of cure, which they then publish as bait to the unfortunate help-seeking sufferer, is something which can hard-

ly be believed. Let me tell you of one instance: A poor woman in the last stages of consumption came to me seeking advice. When asked for the name of her former medical attendant, she confessed that she had been treated for a number of weeks by a quack concern, and now, her means being exhausted, she was made to understand that they would not continue to treat her unless she would give them a certified testimonial that she had been thoroughly cured of her disease, which had been pronounced an advanced case of consumption by prominent physicians. This poor sufferer had not derived any benefit whatsoever from the treatment, and as a result her conscience would not permit her to become a partner to such a fraudulent procedure.

Some of these unscrupulous concerns resort to absolute fraud to beguile the public by using the name of the great scientist and benefactor, Prof. Robert Koch, of Berlin, as though he were associated with them in their business and treatment. They advertise his picture beside that of an individual with a similar name, and are heading their advertisements as "Professor Robert Koch's Cure." While the medical profession at large was, of course, aware of this evident fraud, the public did not seem to be, and in order to be able to give an official denial of any such connection, a member of the Committee on the Prevention of Tuberculosis of the Charity Organization Society of New York City wrote to Prof. Robert Koch of Berlin, Germany. The professor's answer was a lengthy one and full of indignation, and I will give you only the substance of it. He says that the alleged "lung cure" of Dr. Edward Koch, or under whatever name this system of treatment may be presented to the American public, is a very base fraud, and that he, Geheimrath Professor Dr. Robert Koch, has no relations whatsoever with Dr. Edward Koch, with any other individual who may be connected with this concern, nor with any of its methods of treatment; neither has he ever had any relations with the same. He hopes that the committee on the prevention of tuberculosis may be successful in putting an end to this base and fraudulent concern. This is to be particularly desired

in the interest of the many poor consumptives who have been deceived by the use of his name in connection with the so-called Koch's Consumption and Asthma Cure.

There are numerous other concerns which put their secret consumption remedies on the market and resort to all sorts of illegitimate means to make people believe that their "cures" are endorsed by the profession. Some claim to have the endorsement of the British Congress on Tuberculosis, others to be members of that congress; some even resort to most cunning means to make it appear that members of the tuberculosis committee of the New York Charity Organization Society endorse their treatment. These remedies, when not harmful concoctions, are sometimes commonplace medicines subscribed daily by the profession. One firm puts up the prescription for a tonic given by a certain Vienna physician, a former assistant to a polyclinic (dispensary). The drug firm calls this doctor "the great Vienna Professor." An individual alleged to have been cured from consumption by "the Professor," with the aid of the remedy now put up by this firm, is exhibited in the drug store as a living testimony of the great value of the anti-consumptive remedy for sale there.

The misuse of the name of the Committee on the Prevention of Tuberculosis and of some of its members has become so intolerable that the following resolutions were adopted recently by the committee, and the lay press has been requested to give them the largest possible publicity:

Whereas, It has come to the knowledge of the Committee on Tuberculosis of the Charity Organization Society that many so-called specific medicines and special methods of cure for tuberculosis have been and are being exploited and widely advertised, and

Whereas, The advertisements of some of these cures have made such reference to the Tuberculosis Committee of the Charity Organization Society, or to some of its members, as to create the inference that this committee, or its members, recommend or advocate the use of many such so-called specifics or special methods of cure for pulmonary tuberculosis, or consumption; and

Whereas, There is no specific medicine for this disease known, and the so-called cures and specifics and special methods of treatment widely advertised in the daily papers are in the opinion

of the committee without special value, and do not at all justify the extravagant claims made for them, and serve chiefly to enrich the promoters at the expense of the poor and frequently ignorant or credulous consumptives; therefore,

Resolved, That a public announcement be made that it is the unanimous opinion of the members of this committee that there exist no specific medicine for the treatment of pulmonary tuberculosis, and that no cure can be expected from any kind of medicine or method except the regularly accepted treatment, which relies mainly upon pure air and nourishing food.

Value of Educating the Public.

To break the nefarious trade of the man who deals in "sure and infallible" consumption remedies, to stop the practice of the man and woman who claim to be able to diagnose and treat consumption by letter, the Christian scientists, the faith curists, who ridicule preventive measures and the laws of cleanliness and hygiene—which are the laws of God—but who, as a token of faith, demand their fees in advance; we have but one weapon, and that is education—education by a conscientious press, the clergyman and the teacher.

The Duties of Employers.

Factories, workshops, stores, offices, etc., should be sanitarily constructed and well ventilated, but besides this there are other things which the employer can do in the combat of tuberculosis. In factories, workshops, stores, offices, etc., there should always be a sufficient number of spittoons, preferably elevated and of unbreakable material. Wherever such precautions are taken and some conspicuous signs, forbidding expectorating on the floor, put up, and if necessary, making it punishable by law, promiscuous spitting will soon cease, and an important point in the combat of tuberculosis will be gained.

All employees, men and women, of whatever class, should be allowed ample and regular time for their meals, which should never be taken in the workshops. Lastly, employees should not be overworked. There should be reasonable hours for all, so that the laborer may enjoy the bodily and mental rest which is essential to the preservation of health. The germs of any disease, but particularly those of tuberculosis, will always find a

more congenial soil for development in an overworked and enfeebled system. Child labor, that is to say, the employment of children under fourteen years of age, in factories, workshops, mines, etc., should be prohibited by law. The child is more susceptible to tuberculosis than the adult, especially when its delicate growing organism is subject to continued physical strain. That there are still sections in our country where child labor is permitted to exist, is one of the saddest and most disgraceful blots upon the fair name of our nation.

The Duties of the Philanthropist.

It is hardly fair to speak of the duty of the rich as philanthropists, for philanthropy is a voluntary act, and the rich man cannot be compelled to give some of his wealth to his less fortunate fellowmen. Still less have we a right to dictate to a millionaire how to dispose of his wealth though he may be philanthropically inclined. This country has, nevertheless, a right to be proud of many of its rich men and women, and I am the last to underestimate the fortunes which have been given to the various educational and religious institutions by our Carnegies, Rockefellers, Vanderbilts, Morgans, Piersons, Schiffs, our Helen Goulds, Phoebe Hearsts, Emmons Blaines, etc., but it is natural that those of us familiar with the needs of the consumptive poor in this country should look for help in solving this difficult tuberculosis problem to the large-hearted American men and women who make such noble use of their wealth. There are now, perhaps, plenty of libraries and colleges, and even general hospitals, everywhere; but there is a scarcity of public baths, which should, at a moderate price, be at the disposal of the people every day, winter and summer, and for some hours in the evening. There is a scarcity of decently-kept places of amusement, open all the year, where the laborer and his family may spend a pleasant Sunday afternoon and partake of non-alcoholic drinks. There is a scarcity of hospital and sanatorium facilities for thousands of poor consumptives who could be cured if only taken care of in time. Sanatoria for consumptive adults, as well as seaside sanatoria for scrofulous

and tuberculous children, are a crying and urgent need for the majority of our large American cities. The more consumptives we cure, the more breadwinners we create, and the fewer people will become burdens to the communities. As the conditions are now, in most of our cities and towns, the majority of consumptives are doomed to a certain and lingering death; and if they are careless or ignorant of the necessary precautions they will infect some of their own kin and neighbors.

There are from ten to fifteen thousand consumptive poor in New York City and there is hardly hospital and sanatorium accommodation for one thousand. The remainder are not treated at all, or receive what treatment is possible in the home of the poor. Recent statistics, compiled by the department of health of the city of New York show that during the past year 1,750 consumptives, who were finally received and have died in the public hospitals, had been homeless. They had slept in cheap lodging-houses, hallways, or wherever they could find shelter for the night. Thirty-seven of them were found dead in such places. What do these many homeless cases mean when viewed as sources of infection? This must give food for thought to statesman, sanitarian and philanthropist alike.

Would that I could take some of our philanthropic friends to our densely crowded tenement districts and show them there the suffering of mind and body of the poor consumptive who must die, not because his disease was incurable, but because there was no place to cure it. I am convinced that if our generous and wealthy fellow citizens would but see for themselves these conditions, instead of more libraries, universities and colleges, we would soon have better tenements, more playgrounds and parks for children, and an abundance of sanatoria and hospitals for our consumptive poor.

A few more gifts, such as recently bestowed by Charles M. Schwab in the shape of an extensive and beautiful playground to the children of New York, and by Henry Phipps, in the shape of a tuberculosis institute for Philadelphia's consumptive poor, will work wonders in the reduction of the mortality from tuberculosis.

Concerning the recent magnificent donation of Mr. Rockefeller of seven million dollars to search for a specific medicine to cure consumption, I could wish that the University, respectively the city of Chicago, which is the recipient of the gift, were allowed to use the greater portion of these millions for the purchase of the worst tenements in that city and the erection of model houses for the laborer in their stead; for the establishment of a few playgrounds, for public baths, and last, but not least, for the establishment and maintenance of sanatoria for the poor and moderately poor consumptives.

The Duties of the Municipal Government.

It remains only for me now to speak of the duties of the government. First, what is the duty of the local or municipal government in the combat of tuberculosis as a disease of the masses?

Each city should have an efficient committee on tuberculosis composed of a number of general practitioners, health officers, and trained charity workers. This commission should have its offices in a building connected with a special dispensary for tuberculous patients. Each case applying should be carefully examined for the following purposes:

(1) To determine the applicant's condition by medical examination.

(2) To visit his home if he has been found tuberculous, and to institute such hygienic measures as seem necessary (distribution of pocket spittoons, disinfectants, etc., gratuitously if the patient is poor).

(3) To examine the other members of the family, in order to find out if any of them have also contracted the disease, and, if so, to counsel proper treatment.

(4) To report in full to the sanitary authorities concerning the condition of the patient's dwelling. Its renovation or even destruction may be imperative when it is evident that tuberculosis has become "endemic" there, owing to the condition of the soil or to other sanitary defects.

(5) To determine the financial condition, whether the patient is or is not able to pay, and whether or not by his being taken to an institution, the family will become destitute.

If the latter should be the case, it would be necessary for provision to be made in some way for the family. In many cases a letter of inquiry sent to the former medical attendant of the patient would materially aid in the work of the investigating committee.

Any individual should have the right to present himself for examination, and every physician should be at liberty to recommend any person for examination to the board of his precinct or district.

Every city should, of course, have an efficient health department, a building department, tenement-house commission, street-cleaning department, and a board of education, all of them combining to render the city as sanitary as possible and thus combatting centers of contagion of tuberculosis and other diseases, keeping our streets as free from dust, filth and smoke as possible, preventing the construction of unsanitary, unsafe dwellings and the overcrowding in homes, sweatshops and factories, and making of the public schools where our children dwell so many hours models of perfect ventilation and places for true intellectual and physical development, thus furthering the physical and moral welfare of the entire community.

The Duties of the State Government.

Our state legislators should do their utmost to enact such laws as will secure always proper ventilation and light in public and private buildings. How necessary such laws are, you will believe when I tell you that there are in Manhattan over 200,000 and in Brooklyn over 125,000 dark interior rooms without a window of any kind and having no means of light and ventilation. Such attempts as are now before the New York legislature to cripple the work of the tenement-house commission and allow greedy contractors to continue to erect tenements without light and air, veritable breeding places of consumption, should receive the just condemnation of every citizen in the land.

Prevention of Tuberculosis in Cattle.

Another feature in the combat of consumption, which to my mind has been somewhat neglected, is the prevention

of tuberculosis among animals, for notwithstanding Professor Koch's recent declaration at the tuberculosis congress in London, there is still too much evidence of the possibility of the transmission of tuberculosis from the bovine to the human race. If I am rightly informed, there is an amendment proposed by the Live Stock Association which would enable them to keep cattle in transit for forty consecutive hours without food or water. From an unsigned letter to the editor of the *Evening Post*, of January 29, I quote as follows: "The law as it now stands—depriving the unfortunate animals of those necessities for twenty-eight consecutive hours, through summer's torrid heat and winter's chill—is inhuman enough. To extend this limit of endurance would, indeed, stamp us as a barbarous, disgraced nation, not only in the eyes of the world, but what is worse, in our own estimation. The greed which would tempt a \$600,000,000 organization to impose such a national inhuman stigma should call for loudest condemnation from the government, from the press, and from individuals."

Let me add that we should not forget that close proximity of diseased and healthy individuals, lack of air and food, and other privations, are causes of the propagation of tuberculosis, not only among men but among animals as well, and that consumptive cattle may give consumption to man.

The Duties of the Federal Government.

State boards of health should receive ample appropriation to combat tuberculosis among men and animals and be helpful in creating state sanatoria and agricultural colonies for consumptive adults and seaside sanatoria for scrofulous and tuberculous children; also special hospitals and tuberculosis dispensaries; and lastly, the United States Government should, after the example of Great Britain, France and Germany, not only have a ministry of public health, but also a special commission, appointed by the president of the United States, composed of expert sanitarians, physicians and veterinarians, who should unite with the state and municipal sanitary authorities of the country in the combat of tuberculosis in all its forms among man and beast.

Conclusion.

If every individual in his respective sphere, and the local, state and federal governments, would do their full duty in the combat of this fearful scourge of mankind, so justly called by Oliver Wendell Holmes "the great white plague," I am convinced that before many decades tuberculosis would be eradicated from our midst, and the United States would have the honor of being the first among the nations of the earth to have accomplished this great and glorious work.

UNIVERSITY OF ILLINOIS — URBANA



N30112067732922A